THE QUANTUM MECHANICS OF HYDROGEN STORAGE AND ISOTOPE SEPARATION

ABSTRACT: The main obstacle to developing hydrogen powered cars is the lack of a suitable way to store onboard hydrogen (a big balloon just doesn’t work). Much research is thus aimed at developing nano-porous materials to act as a “hydrogen sponge”. Our contribution focuses on a novel application of infrared spectroscopy to probe the behavior of the trapped hydrogen. This work reveals some fascinating quantum behavior and an unexpected method for separating out the rare hydrogen isotopes. You never know where research will lead you.